COMPARISON OF WAVELENGTH DISTRIBUTION OF UV SOURCES

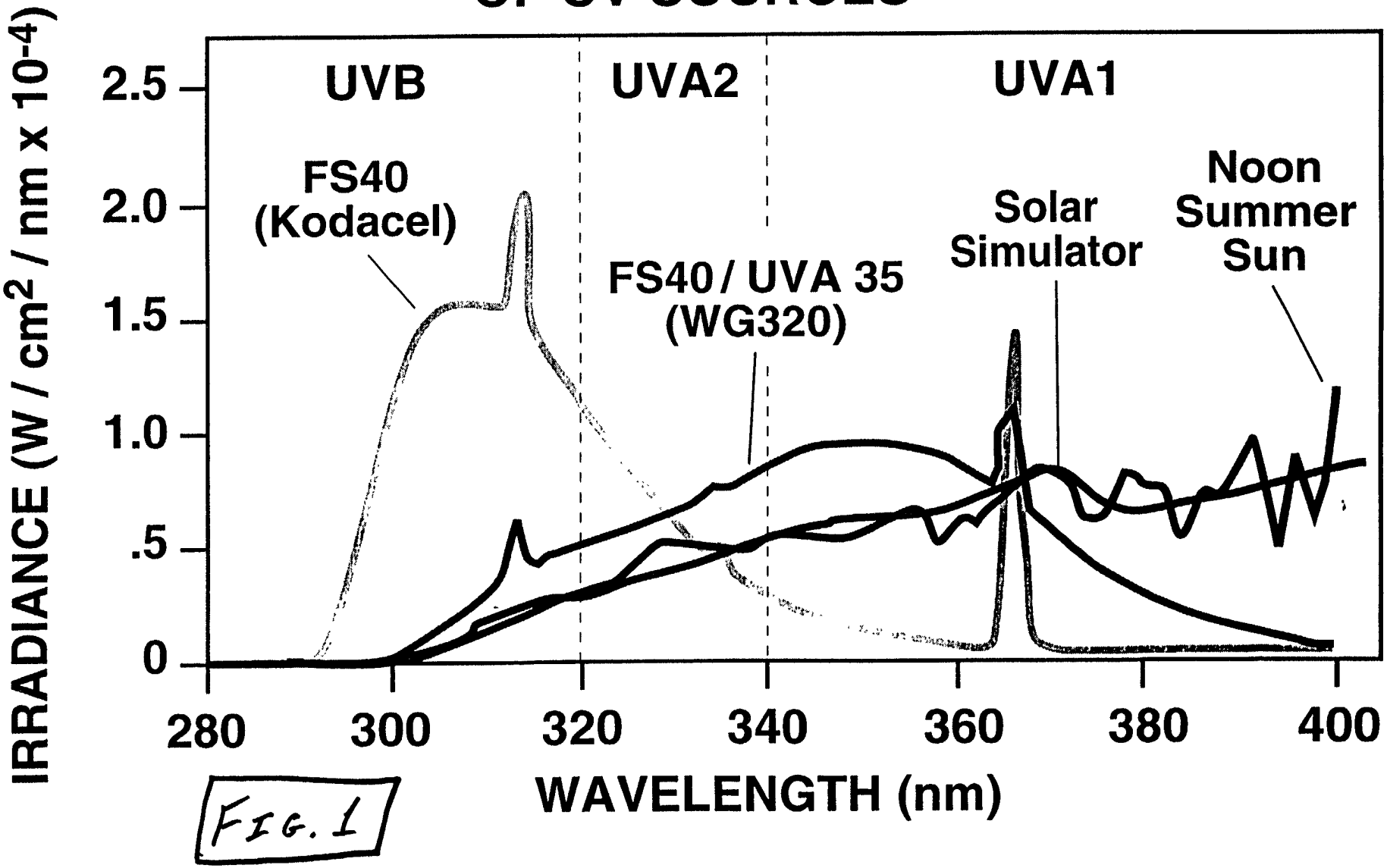


FIG. 1

FIG 2A SE500660

SOLAR SIMULATED LIGHT INDUCES cJUN IN HUMAN SKIN *IN VIVO*

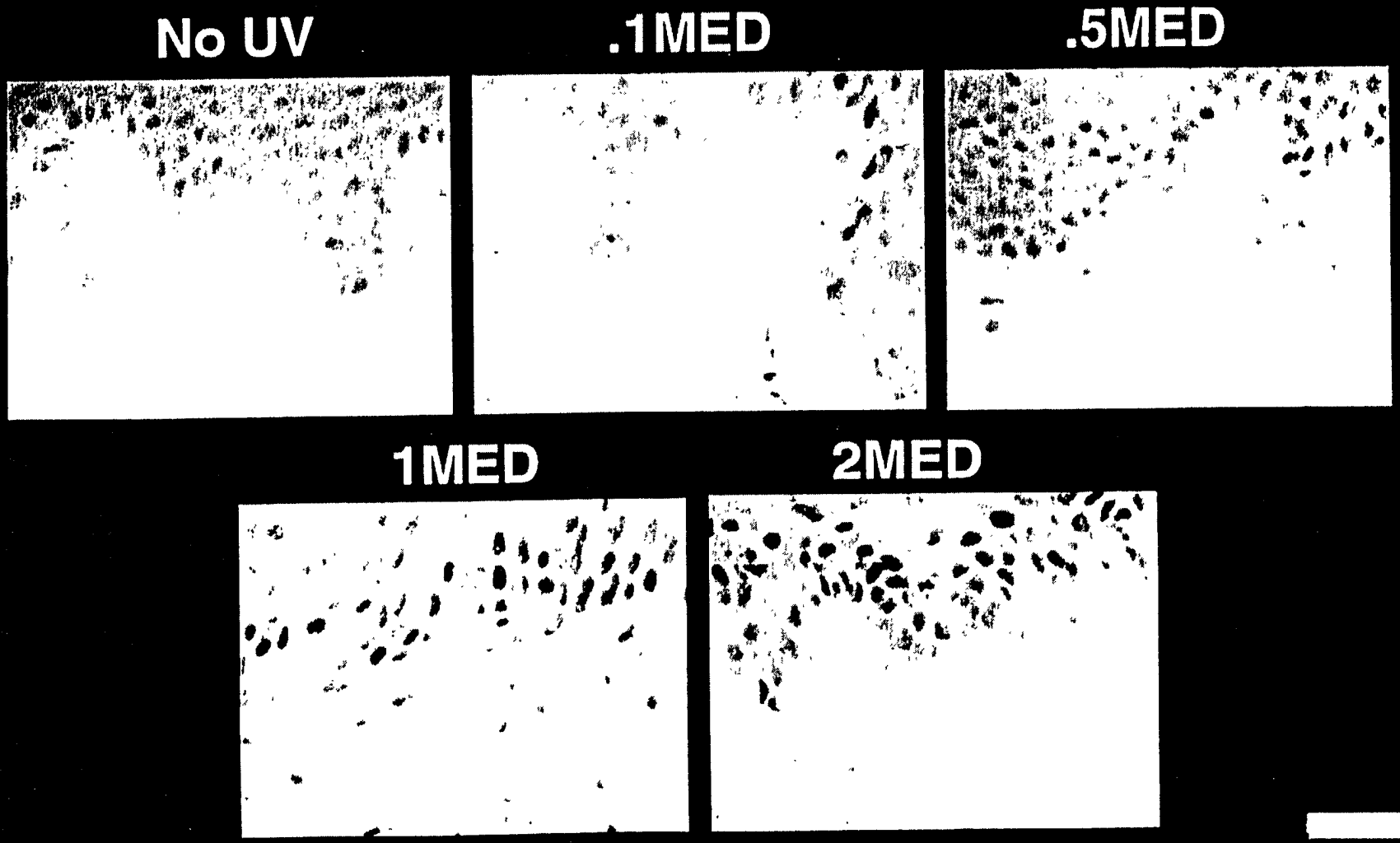


FIG. 2B SES00660

SOLAR SIMULATED LIGHT ACTIVATES NF-κB IN HUMAN SKIN *IN VIVO*

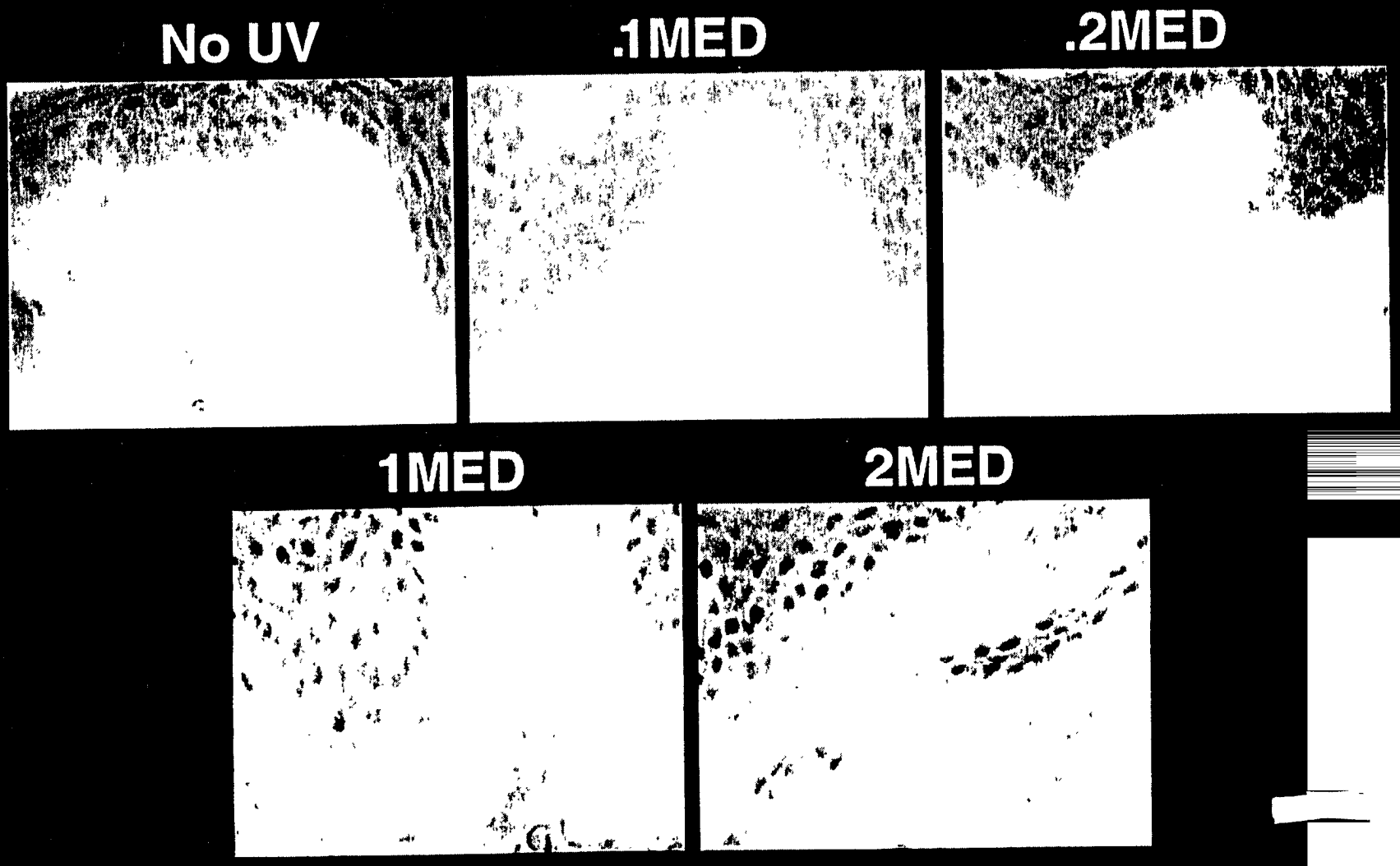


FIG. 3A

SOLAR-SIMULATED UV INDUCTION OF COLLAGENASE IN HUMAN SKIN *IN VIVO*

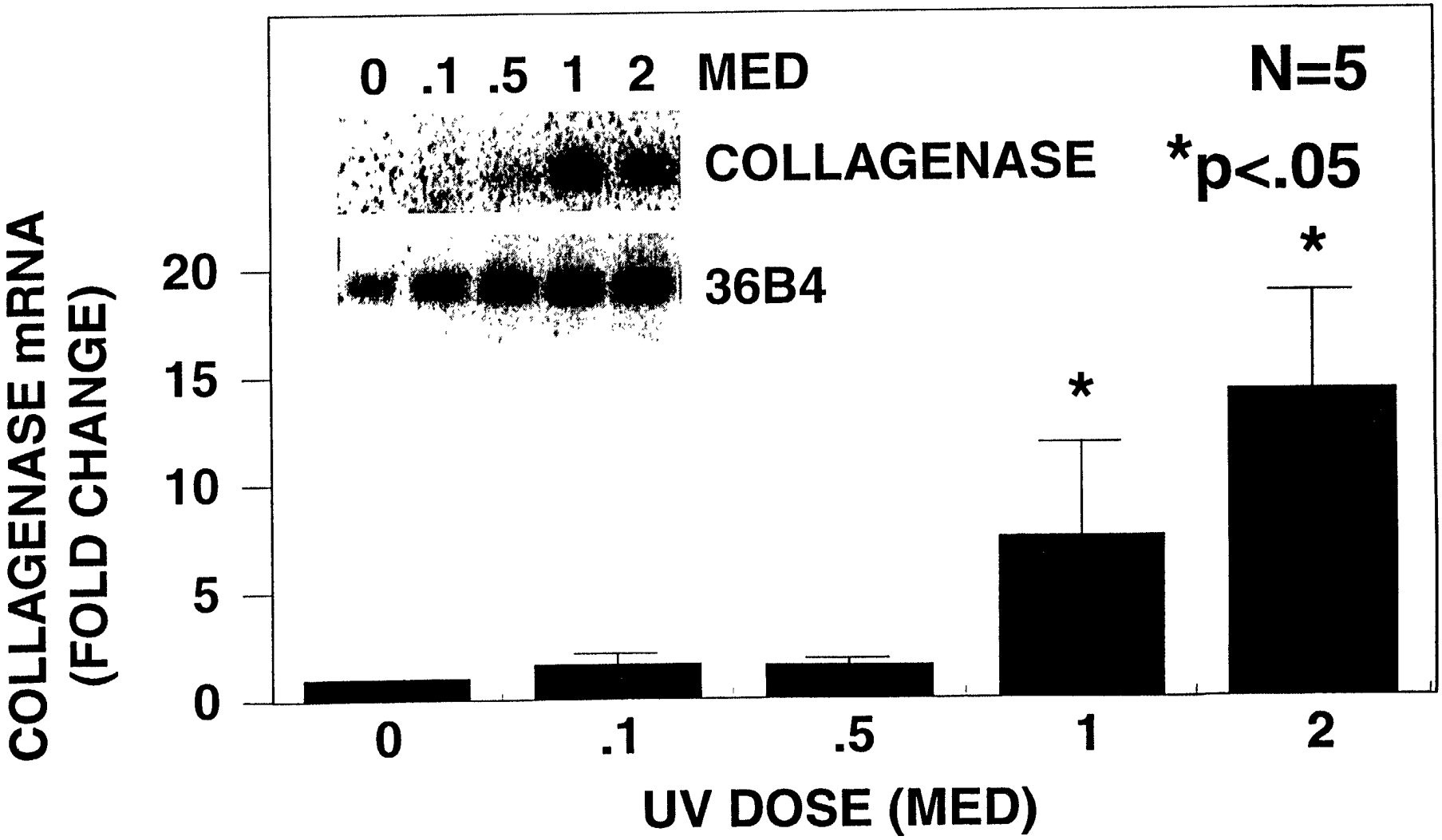


FIG. 3B

DOSE DEPENDENCE FOR SOLAR-STIMULATED UV INDUCTION OF 92kDa GELATINASE ACTIVITY IN HUMAN SKIN *IN VIVO*

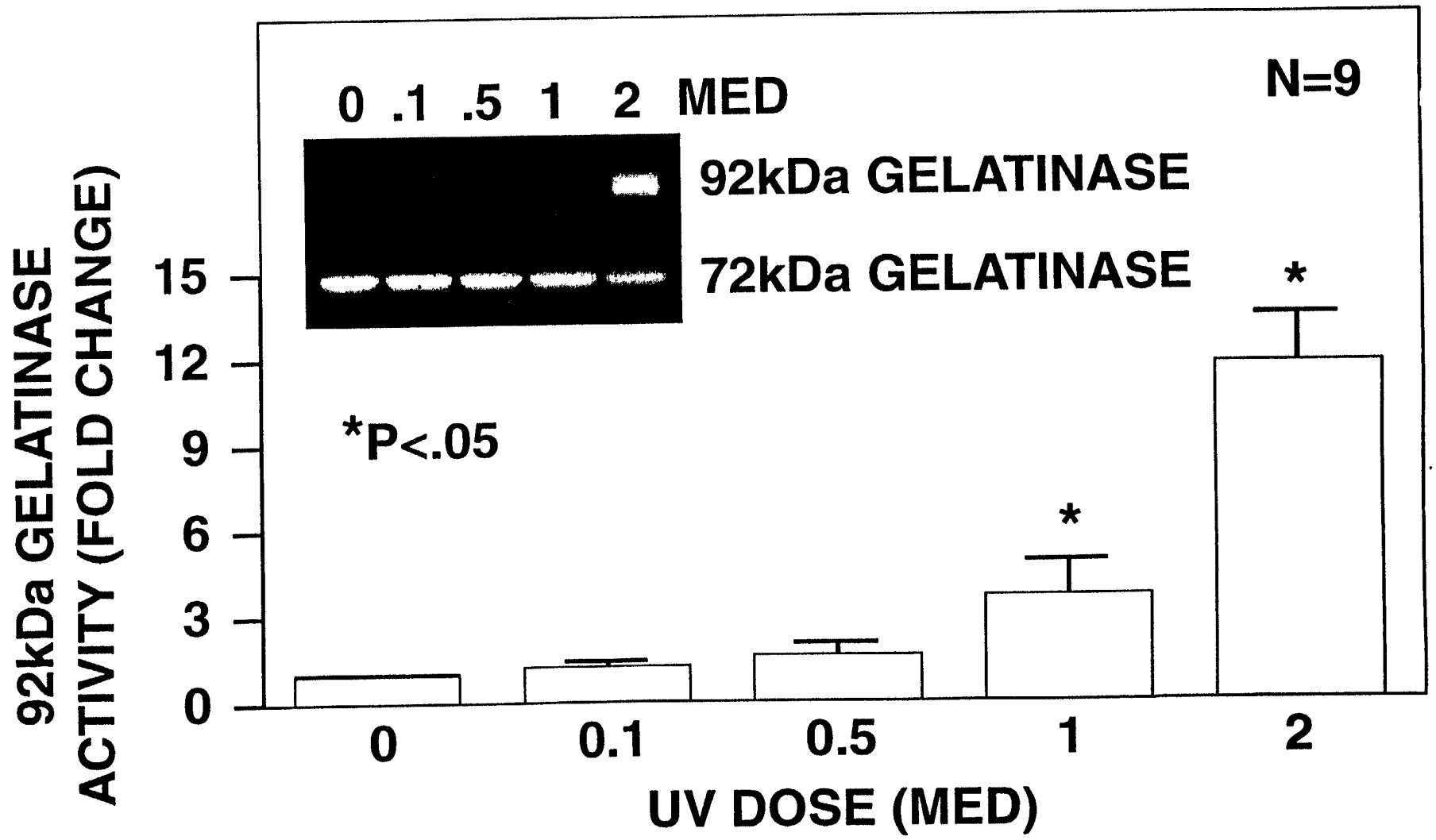
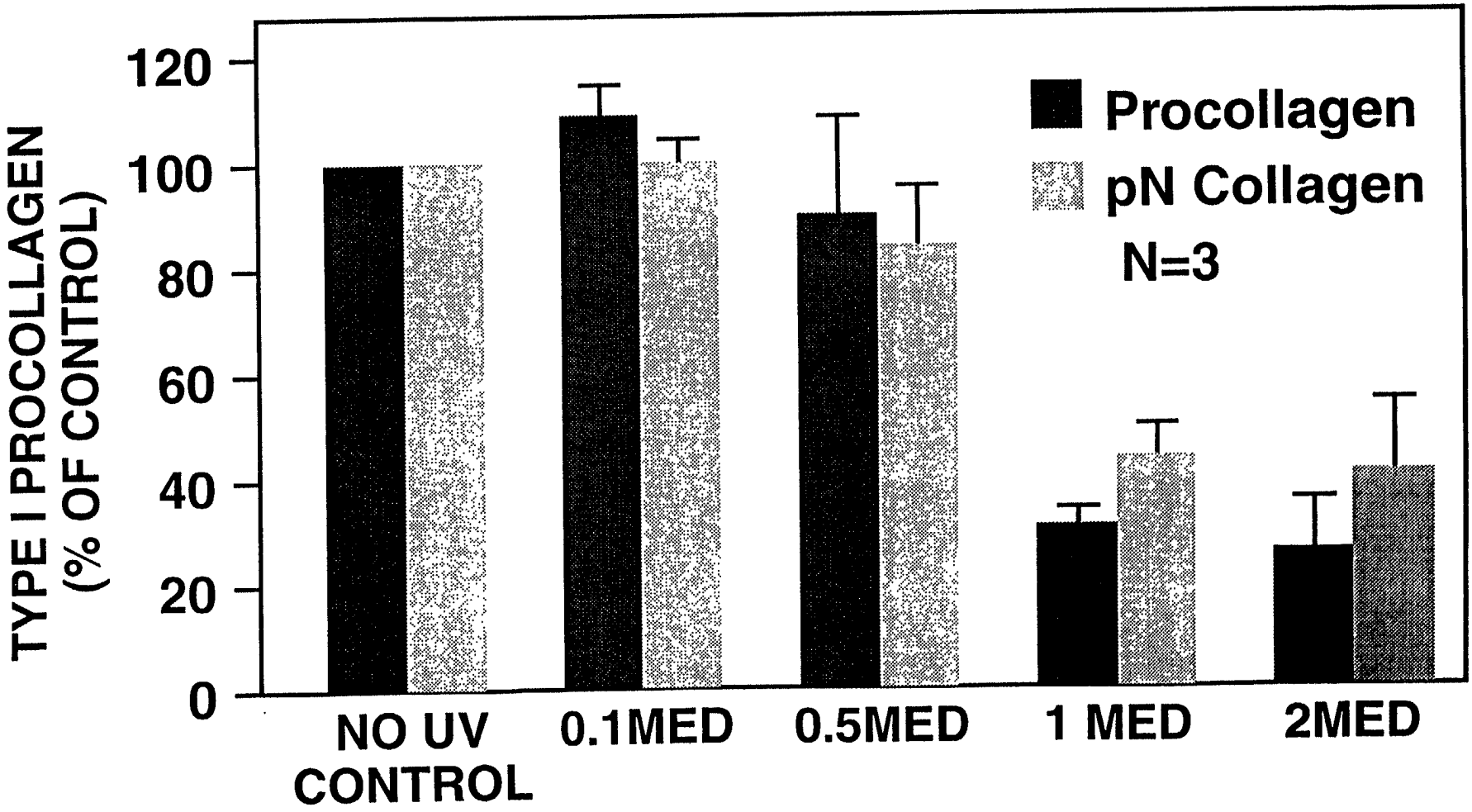


FIG. 3C

SOLAR SIMULATED UV REDUCES TYPE I PROCOLLAGEN IN HUMAN SKIN *IN VIVO*



UVB & LONG UVA INDUCE COLLAGENASE (MMP-1) mRNA IN HUMAN SKIN *IN VIVO*

FIG. 4A

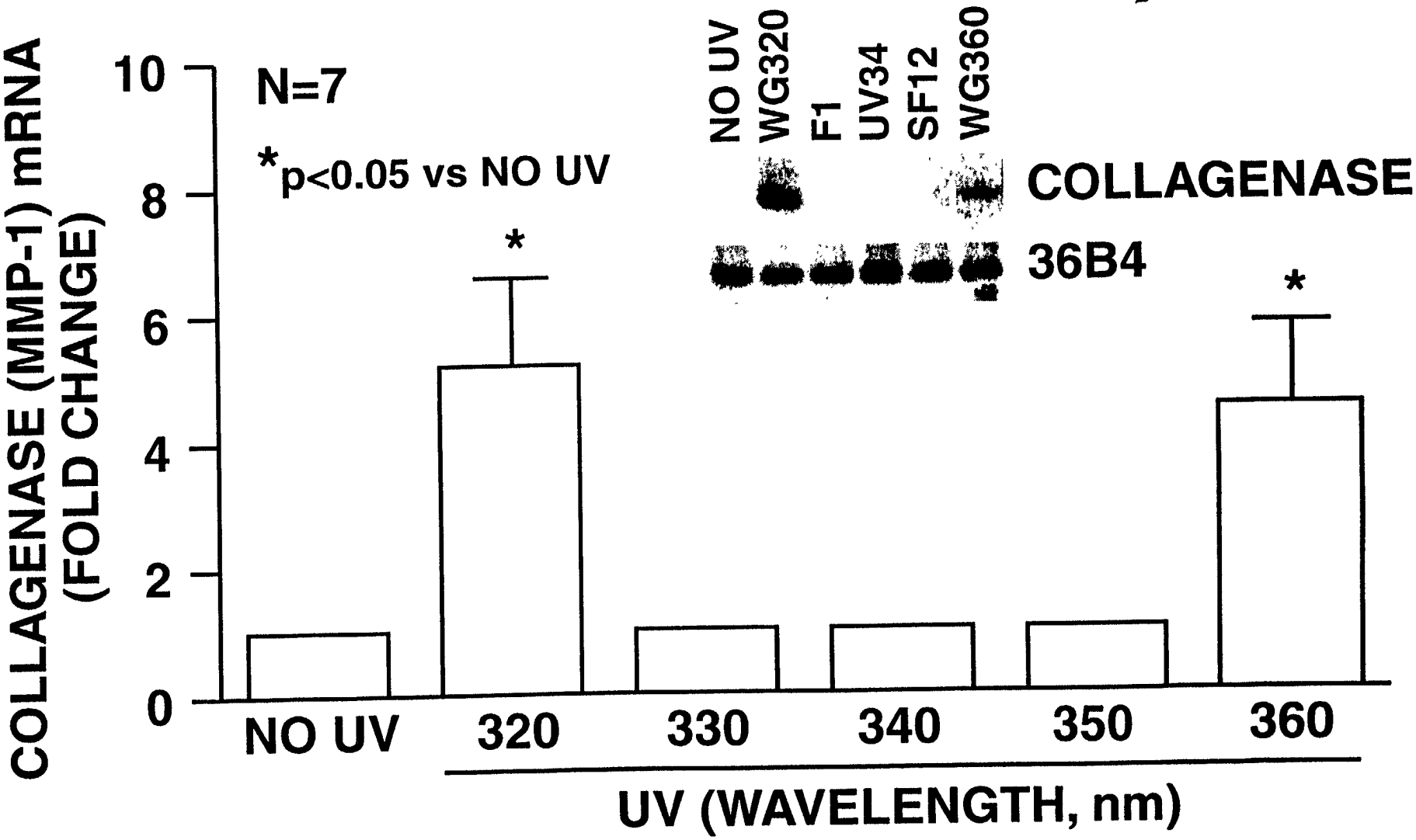
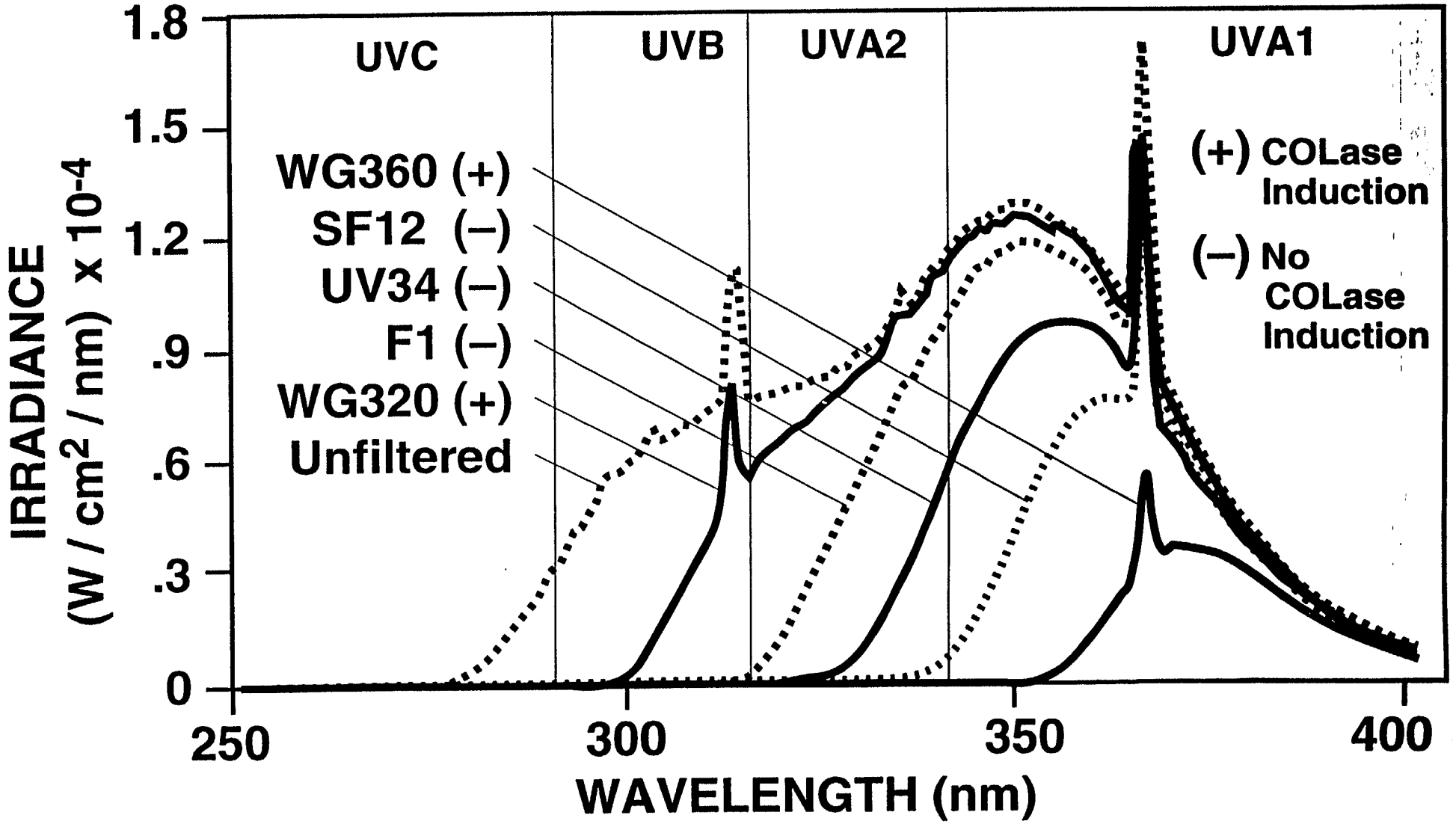


FIG. 4B

CHARACTERISTICS OF UV FILTERS USED TO DETERMINE WAVELENGTH DEPENDENCE OF COLLAGENASE INDUCTION IN HUMAN SKIN *IN VIVO*



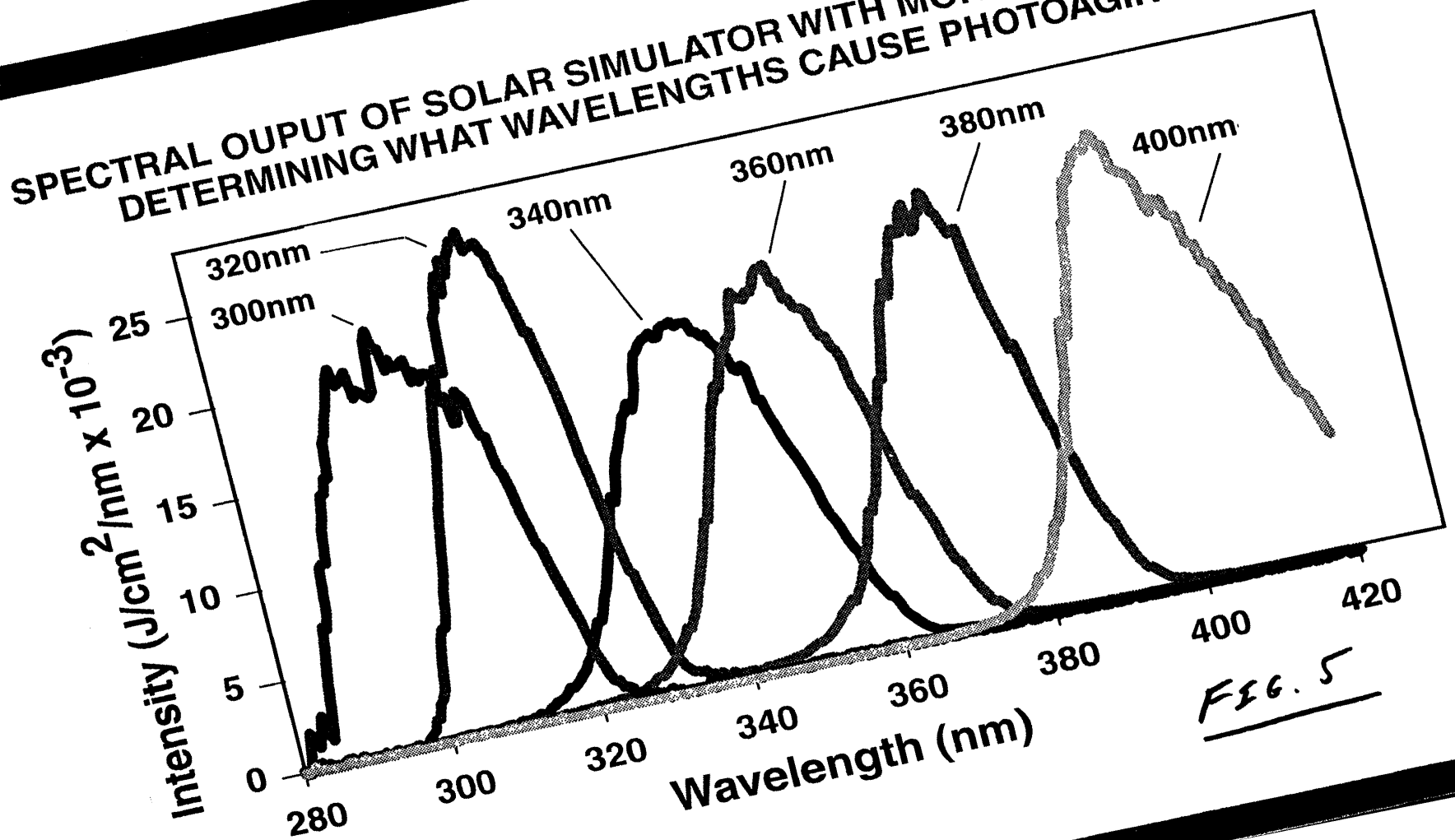
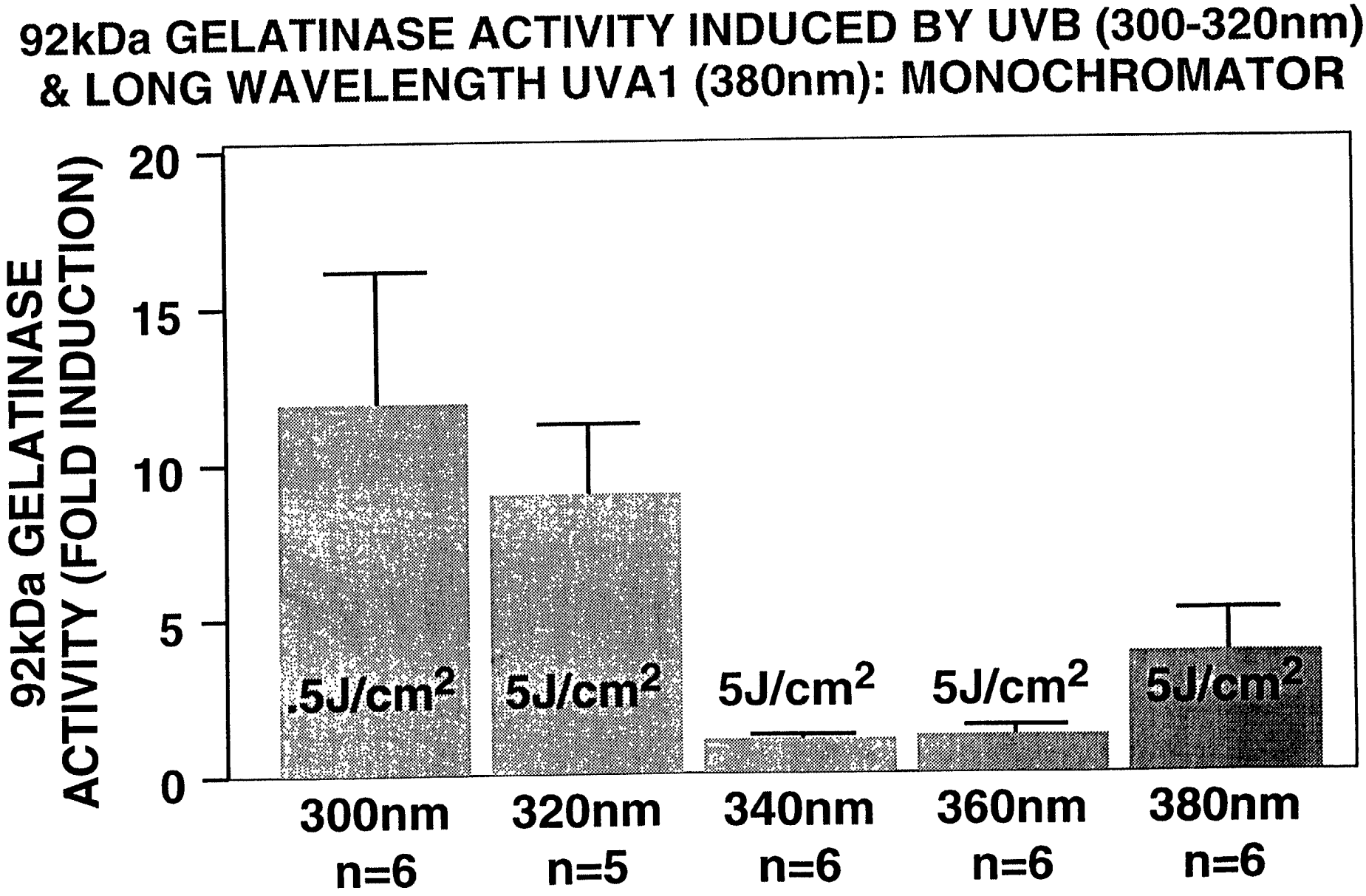

SPECTRAL OUPUT OF SOLAR SIMULATOR WITH MONOCHROMATOR:
DETERMINING WHAT WAVELENGTHS CAUSE PHOTOAGING
320nm
300nm
340nm
360nm
380nm
400nm
Intensity (J/cm2/nm x 10-3)
25
20
15
10
5
0
280
300
320
340
360
380
400
420
Wavelength (nm)

FIG. 5

FIG. 6A


92kDa GELATINASE ACTIVITY INDUCED BY UVB (300-320nm) & LONG WAVELENGTH UVA1 (380nm): MONOCHROMATOR
92kDa GELATINASE ACTIVITY (FOLD INDUCTION)
20
15
10
5
0
.5J/cm2
5J/cm2
5J/cm2
5J/cm2
5J/cm2
300nm n=6
320nm n=5
340nm n=6
360nm n=6
380nm n=6

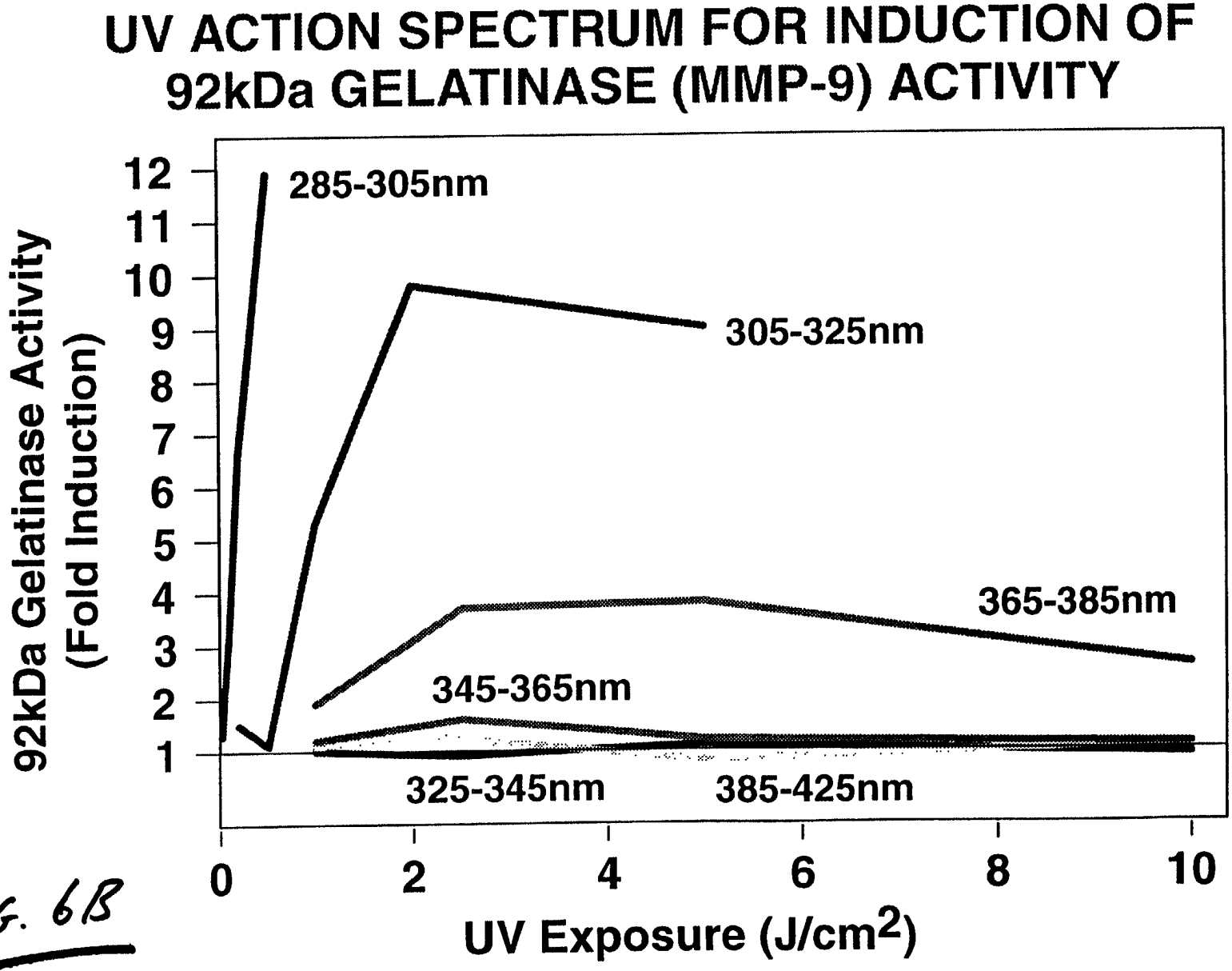

UV ACTION SPECTRUM FOR INDUCTION OF
92kDa GELATINASE (MMP-9) ACTIVITY
92kDa Gelatinase Activity
(Fold Induction)
12
11
10
9
8
7
6
5
4
3
2
1
285-305nm
305-325nm
365-385nm
345-365nm
325-345nm
385-425nm
0
2
4
6
8
10
UV Exposure (J/cm2)

FIG. 6B

FIG. 6C

RELATIVE EFFECTIVENESS OF UV WAVELENGTH TO INDUCE 92 kDa GELATINASE ACTIVITY IN HUMAN SKIN *IN VIVO*

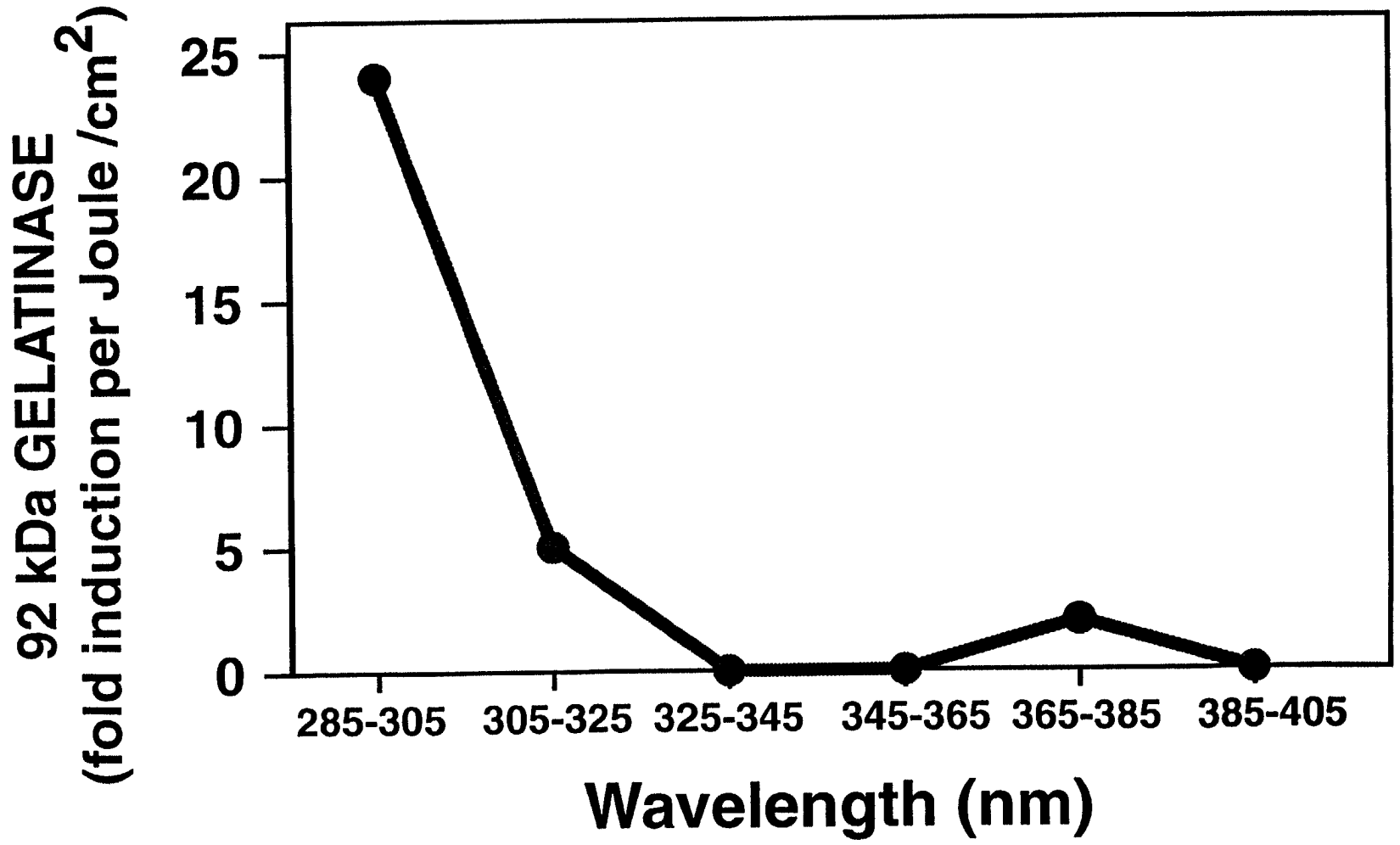


FIG. 7

EFFECTIVE CONTRIBUTION OF UV WAVELENGTHS TO INDUCTION OF 92kDa GELATINASE ACTIVITY BY SOLAR-SIMULATED UV IN HUMAN SKIN *IN VIVO*

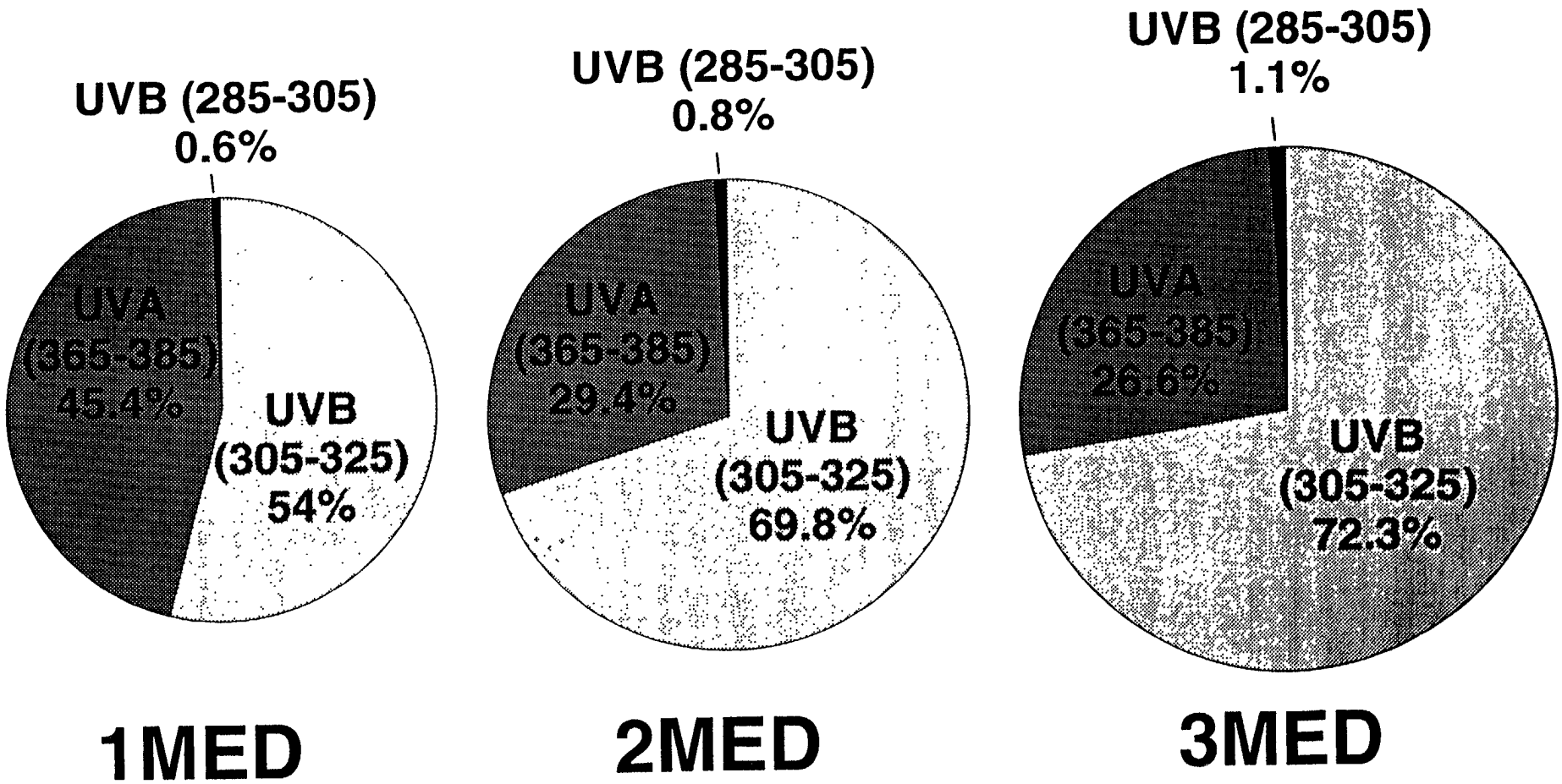


FIG. 8

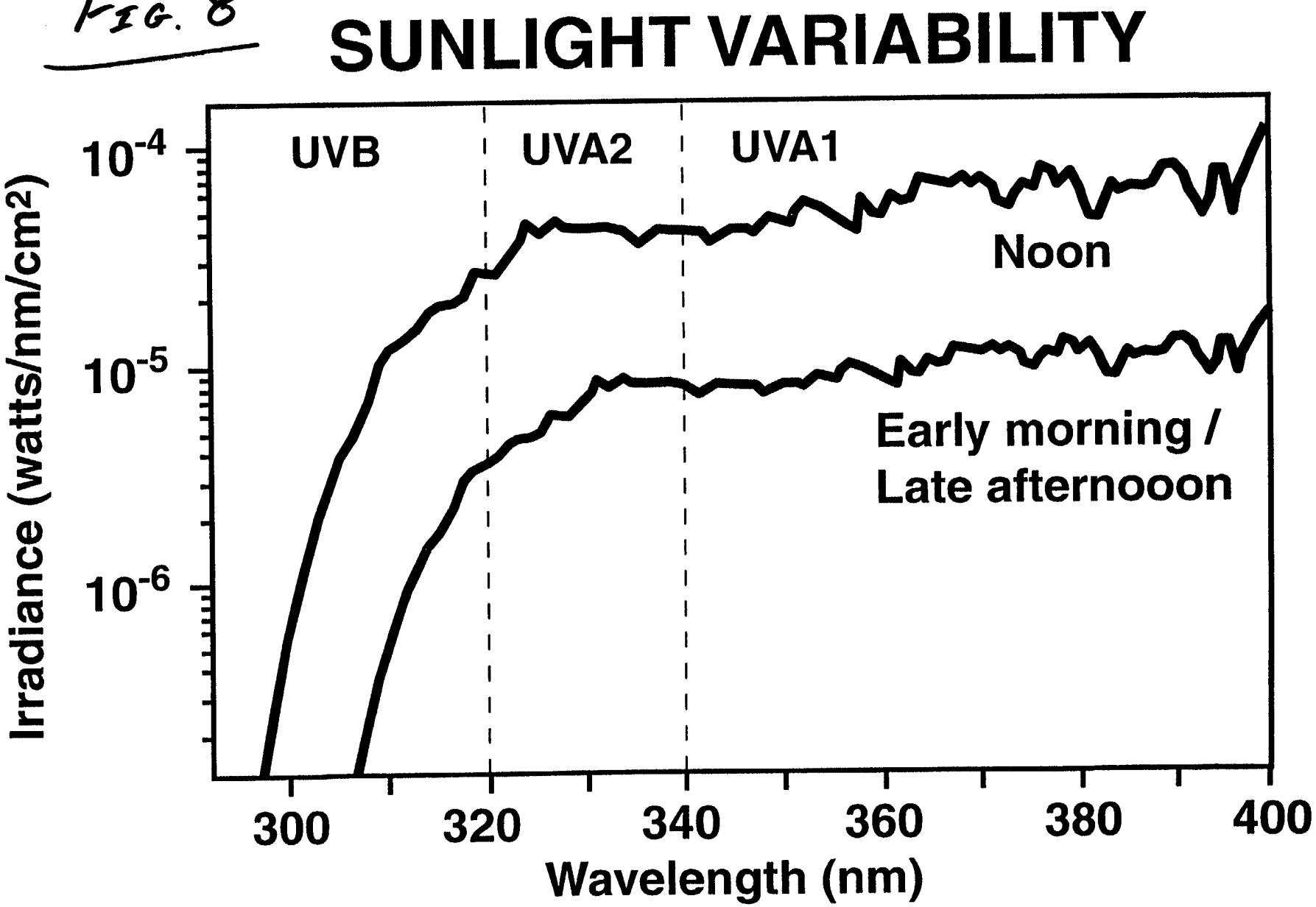

SUNLIGHT VARIABILITY
UVB
UVA2
UVA1
Noon
Early morning /
Late afternooon
Irradiance (watts/nm/cm²)
10⁻⁴
10⁻⁵
10⁻⁶
300
320
340
360
380
400
Wavelength (nm)

FIG. 9

ABSORPTION SPECTRA OF PARSOL 1789 & MCX IN ABSOLUTE ETHANOL

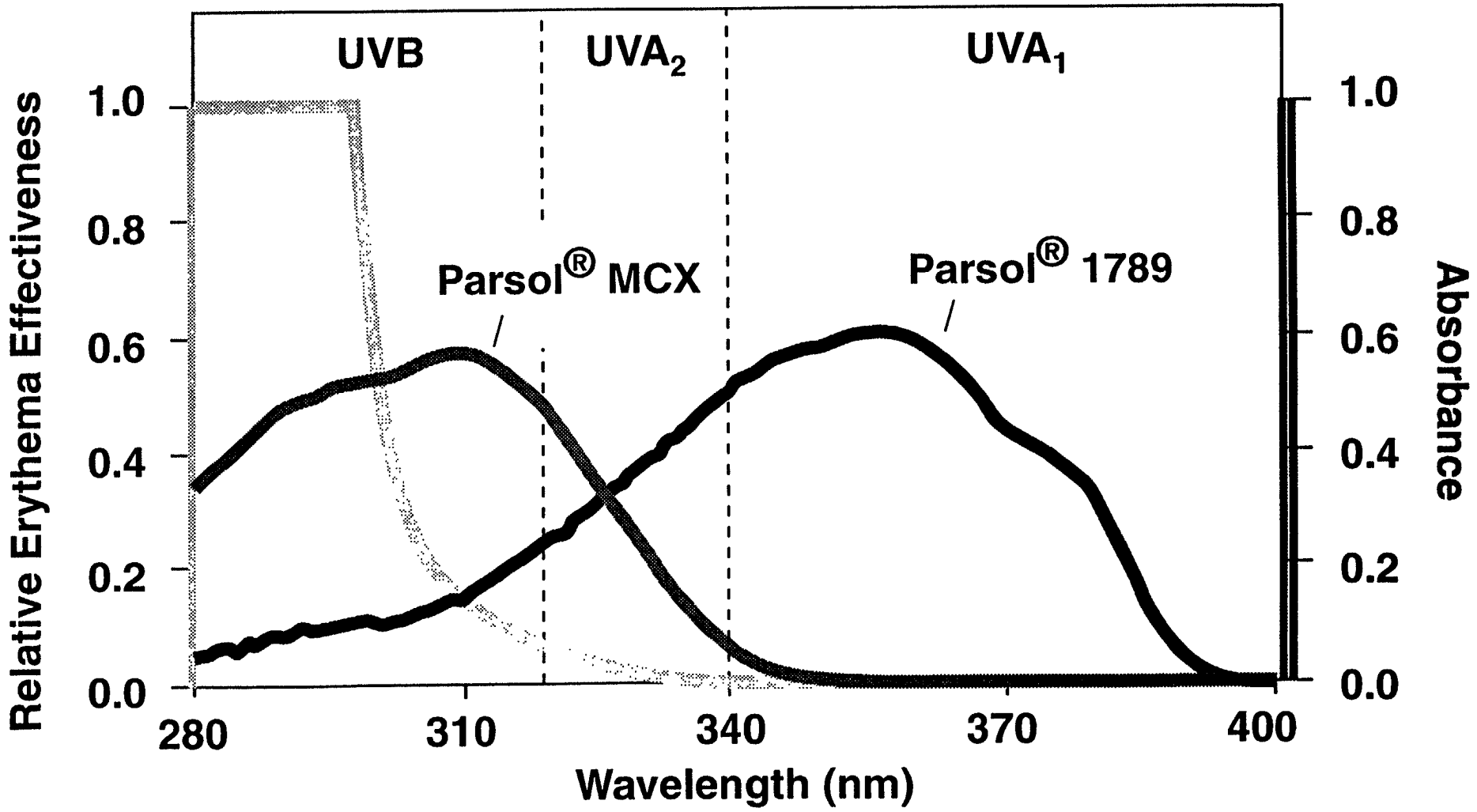
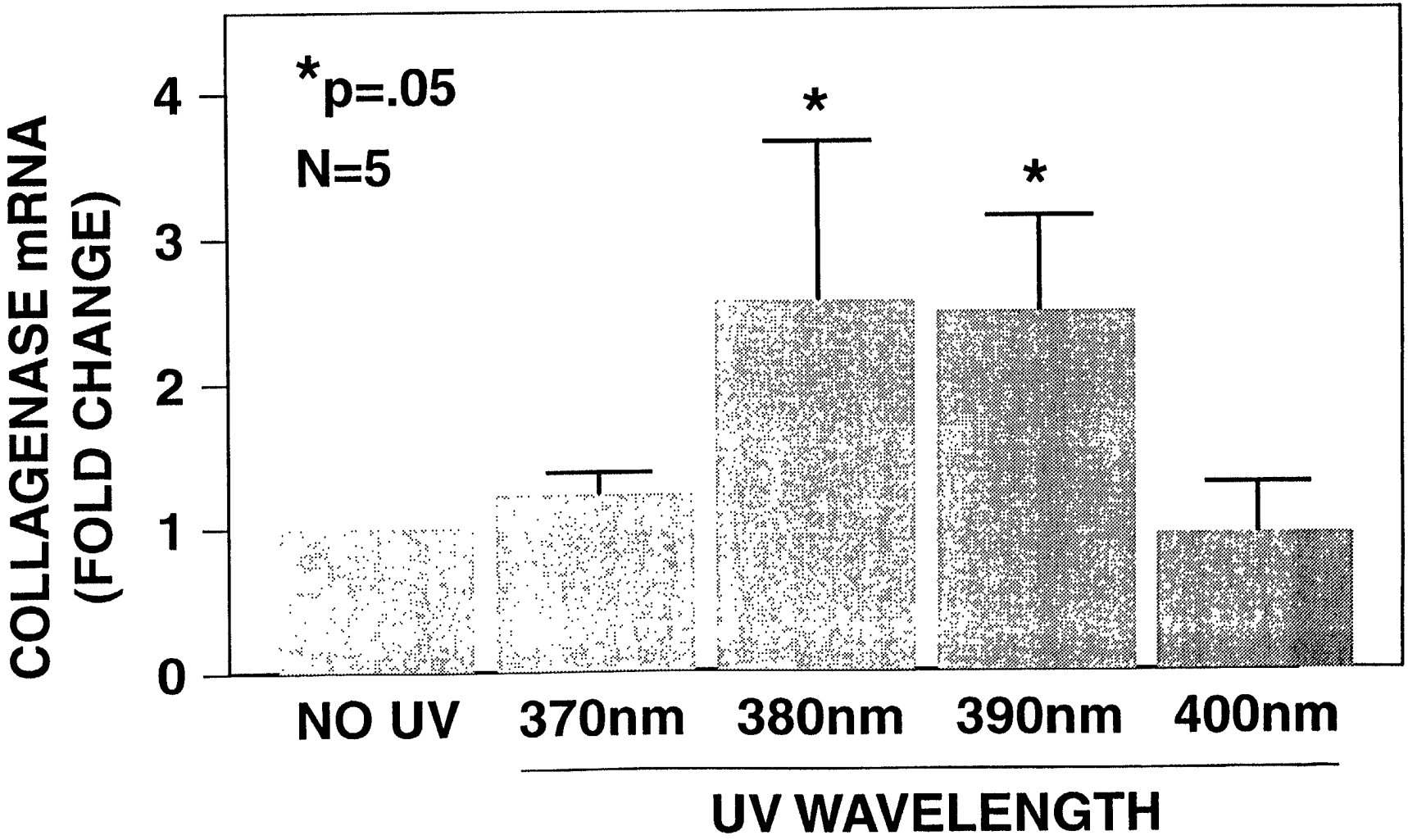


FIG. 10

UVA1 WAVELENGTH DEPENDENCE FOR INDUCTION OF COLLAGENASE mRNA IN HUMAN SKIN *IN VIVO*



UVB/A2 Wavelength Dependence for Induction of Collagenase mRNA in Human skin in vivo

NO UV	300	310	320	330	340	350	360	
3.53E+02	1.05E+05	6.70E+04	2.88E+02	2.84E+02	5.05E+02	3.80E+02	3.09E+02	mean
1.31E+02	2.72E+04	8.96E+04	6.34E+01	5.71E+01	2.86E+02	1.13E+02	1.38E+02	sem

FIG. 11